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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/668,833	09/23/2003	Michael T. Rowan	66281.000002	4989

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EXAMINER

GU, SHAWN X

ART UNIT PAPER NUMBER

2189

DATE MAILED: 11/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/668,833	Applicant(s) ROWAN ET AL.	
	Examiner Shawn Gu	Art Unit 2189	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/19/03, 12/16/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

This Office Action is responsive to the application filed on 23 September, 2003.

Claims 1-25 are presented for examination.

Claims 1-25 are pending.

Information Disclosure Statement

The information disclosure statements (IDS) submitted on 19 December 2003 and 16 December 2004 were filed after the mailing date of the application on 23 September 2003. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements are being considered by the examiner.

Specification

The disclosure is objected to because of the following informalities: grammatical or spelling errors in paragraph [0014] of page 5 ("as") and in paragraph [0040] of page 10 ("maintains").

Appropriate correction is required.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1 and 21 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 26, 54, 55 and 66 of copending Application No.10778436. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed invention in the instant application is a broader representation of the conflicting claims in the copending application. The invention in the instant application only describes specifying the address and time when accessing data from a storage, while the invention in the copending application not only specifies the address and time when access data from a storage, but also describes how the specified address and time are related to the accessed data. Furthermore, neither application discloses that having either a single

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storage or a plurality of storages would change the way data is accessed in a single storage, even though the instant application added that the storage system comprises a plurality of units of storage, because both inventions in the instant and co-pending applications describe accessing data from a single storage by specifying an address and a time.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As for claim 10, it is unclear to the examiner whether "removing the data" refers to deleting the data or moving the data to another location. The examiner is rejecting the claim in view of the former interpretation.

Claim Rejections – 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 23-25 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As for claims 23-25, the data packet which corresponds to the storage command as claimed is deemed non-statutory, as the claim is merely describing data.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-10, 13-15, 18, 19, 21-25 are rejected under U.S.C. 102(e) as being anticipated by Green et al. [US 2003/0167380 A1] (hereinafter "Green").

As for claim 1, Green teaches a storage system comprising a plurality of units of storage (Fig 6a, Snapshot Caches 652, 654, 656), each unit of storage storing digital data, each unit of storage accessed by specifying an address and a time (Fig 40, "Volumes" and "Date and time"; Page 12, Paragraph 0148).

As for claim 2, Green teaches the storage system further comprising one or more physical storage devices (Figure 44, 4410 Disk A, 4412 Disk B, 4414 Disk C; Pages 12-13, Paragraphs 0154 and 0155) on which the digital data are stored.

As for claim 3, Green teaches the address comprises a device identifier (Page 12, Paragraphs 0154 and 0155; Figure 44, 4410 Disk A, 4412 Disk B, 4414 Disk C; the system must be able to identify the disk which contains the requested snapshot) and a location identifier (the system must be able to address the location of the snapshot on the disk it is residing in order to retrieve it).

As for claim 4, Green teaches the device identifier identifies a physical storage device (Page 12, Paragraphs 0154 and 0155; Figure 44, 4410 Disk A, 4412 Disk B, 4414 Disk C; the system must be able to identify the disk which contains the requested snapshot).

As for claim 5, Green teaches the device identifier identifies a logical device (Page 12, Paragraph 0148; Fig 40; the snapshot must be identified in order for the system to restore to that state).

As for claim 6, Green teaches the time specifies that the digital data retrieved from the address is the most recent digital data that was written to the address at or before the time (Fig 3, 330 Volume Granules and 340 Cache Granules; Fig 40; Page 12, Paragraph 12; restoration of the system to a state in which it existed at a particular time).

As for claim 7, Green teaches the time is explicitly specified in a request to access a unit of storage (Fig 40, "Date and time").

As for claim 8, Green teaches the time is specified in a command to the storage system separate from a request to read a unit of storage (Fig 39 and Fig 40, the user interface allows the user to specify the time using the Timestamps, and only request the read after the user selects "OK", thereby separating the command and the request).

As for claim 9, Green teaches the storage system creates a virtual device (snapshot, Page 12, Paragraph 0148), wherein the time is specified when the virtual device is created (Page 5, Paragraph 0061; Page 12, Paragraph 0148), and is applied when the virtual device is accessed (Page 12, Paragraph 0148; Fig 40).

As for claim 10, Green teaches new data is written to the virtual device without removing the data that was written after the time specified when the virtual device was created (Page 5, Paragraphs 0061; Fig 3, 342 1st Snapshot Cache Grid, rows 3 and 4 at times 8 and 9).

As for claim 13, Green teaches the units of storage are blocks (Fig 6a, rows 1-4 in 330 Volume Granules; Page 4, Paragraph 0057).

As for claims 14 and 15, it is clear the method of the claim is performed by the storage system described above by Green.

As for claims 21 and 22, it is clear that the apparatus of the claims is already disclosed above by Green.

As for claims 23 and 25, it is clear the data packet of the claim is contained in the storage system described above by Green.

As for claim 24, Green teaches the storage device command is a write command and the point in time is the present time (Page 5, Paragraph 0061; Fig 3, 340 Cache Granules).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11, 12 and 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Green, in further view of "UNIX in a Nutshell" [Daniel Gilly and the staff of O'Reilly & Associates, Inc] (hereinafter "Gilly").

As for claims 11 and 16-18, Green already substantially discloses the claims as described above, but does not clearly state that a command to the storage system specifies that the time is implicitly the current time. However, Gilly teaches a "cal" command in the UNIX operating system (Page 2-10), wherein a calendar for the current month is displayed to the user when the command is sent to the system with no arguments, thereby implicitly specifying the current time as the default argument. It is clear that implicitly providing the current time as the default when accessing a system wherein time is a necessary argument simplifies the command syntax and increases the user-friendliness of the system since the current time is one of the most frequently used time in such commands, and therefore it would have been obvious to one ordinarily

skilled in the art at the time of the applicant's invention that the feature in Gilly's "cal" command can be incorporated into Green's command in order to simplify command syntax and increase user-friendliness of the Green's system.

As for claims 12 and 20, Green already substantially discloses the claims as described above, but does not clearly state that the time is specified relative to the current time. However, Gilly teaches a "find" command in the UNIX operating system (Pages 2-47 and 2-48), wherein a time relative to the current time is specified as an argument to access data. It is clear that specifying a time relative to the current time when accessing data provides a useful condition for the user to restrict the access to a certain group of data without knowing the exact time value, thereby increasing the user-friendliness of the command and the system. Therefore it would have been obvious to one ordinarily skilled in the art at the time of the applicant's invention that the feature in Gilly's "find" command can be incorporated into Green's command in order to increase user-friendliness of the Green's system.

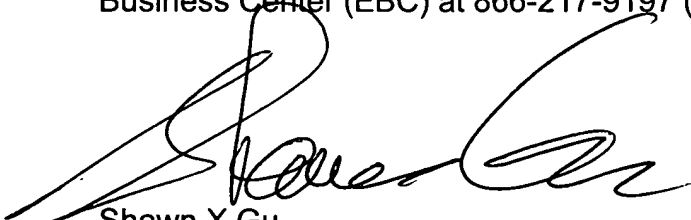
As for claim 19, Green teaches the method further comprises writing data to the virtual storage device (Page 5, Paragraph 0061; Fig 3, 340 Cache Granules).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shawn Gu whose telephone number is (571) 272-0703. The examiner can normally be reached on 9am-5pm, Monday through Friday.

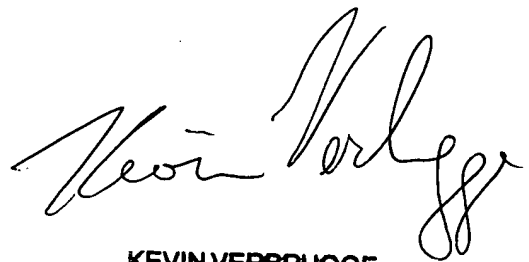
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mano Padmanabhan can be reached on (571)272-4210. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Shawn X Gu
Assistant Examiner
Art Unit 2189

14 November 2005



KEVIN VERBRUGGE
PRIMARY EXAMINER